

*EXOgone ACERATA* (EXOgonINAE: SYLLIDAE: POLYCHAETA),  
A NEW SPECIES WITHOUT ANTENNAE FROM  
THE MEDITERRANEAN SEA

Guillermo San Martín and Julio Parapar

*Abstract.*—*Exogone acerata*, a new species of Exogoninae (Syllidae, Polychaeta) from sandy bottoms off Ceuta (Spain), North Africa, in the Mediterranean Sea, is described. The new species is characterized by lacking antennae and by having long spines on the shaft heads of spinigers.

---

The polychaetous annelids from the Strait of Gibraltar area have been studied by Fauvel (1936), Amoureux (1972, 1976) and Sardá (1984, 1985a, 1985b, 1987). However, there is no information on the polychaetes from the litoral area of Ceuta. Therefore, during the summer of 1986, four samples of sublitoral sand were collected by scuba diving in an expedition carried out by the Musée d'Histoire Naturelle de Paris (Ceuta-86). The polychaetes from these samples are being examined; provisionally, about 88 species have been identified. Among them is the new species of *Exogone* described in this report.

Material and methods, and descriptions of collecting sites were presented in Besteiro, Urgorri & Troncoso (1990).

The type series is mounted in microscopical preparations made with glycerine jelly. Observations and measurements were made by means of a microscope with interferential contrast optics (Nomarsky). Drawings were made by means of a camera lucida drawing tube. Measurements were taken excluding appendages and setae. The type material is deposited in the Museo de Historia Natural Luis Iglesias de la Universidad de Santiago, Spain.

Family Syllidae Grube, 1850  
Subfamily Exogoninae Rioja, 1925  
Genus *Exogone* Örsted, 1845  
*Exogone acerata*, new species

*Material examined.*—Playa Benítez (Ceuta, Spain) (36°54'15"N, 5°19'54"W); sand; 23 m depth; 9 paratypes. El Píneo (Ceuta, Spain) (36°52'36"N, 5°19'46"W); sand; 11 m depth; holotype and two paratypes. All the type series has catalogue number MHNS-1-Pol.

*Etymology.*—The name of the species derives from the Greek, and it means "without antennae."

*Description.*—Body moderately long, slender, filiform, without color marking; holotype, a complete, mature female carrying eggs, is 4 mm long, 0.2 mm wide at proventricular level, and has 40 setigers. Prostomium ovate to pentagonal, approximately three times wider than long. Four eyes in trapezoidal arrangement. Without antennae. Palps broad, longer than prostomium, completely fused all along their length, leaving a small, terminal notch (Fig. 1a). Peristomium well defined, covering dorsally posterior end of prostomium. Ten-

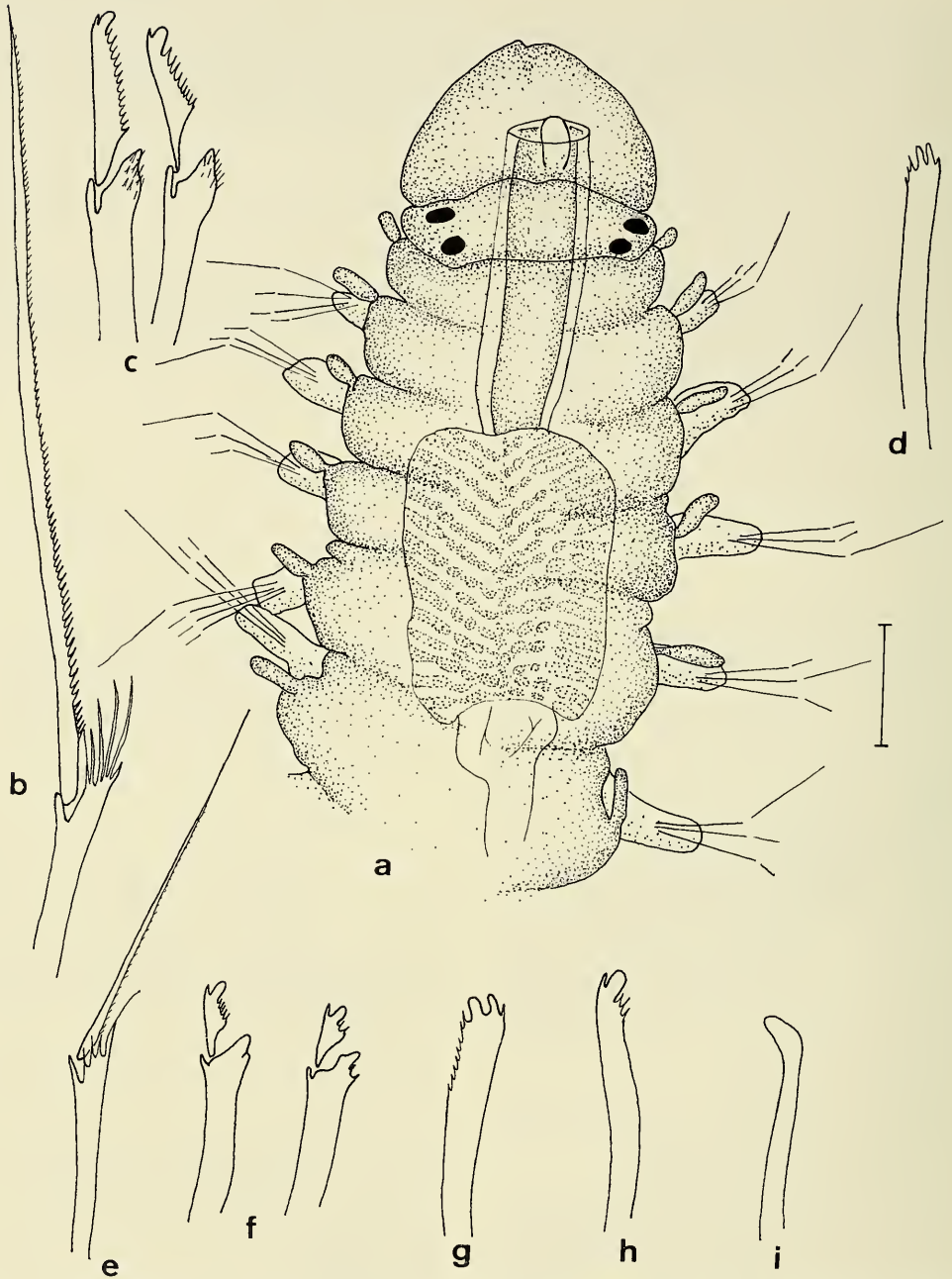


Fig. 1. *Exogone acerata*, n. sp. a, Anterior end, dorsal view of a paratype. Anterior parapodia; b, Spiniger; c, Falcigers; d, Dorsal simple seta. Middle-posterior parapodia; e, Spiniger; f, Falcigers; g, Dorsal simple seta; h, Ventral simple seta; i, Aciculum. Scale: a, 64  $\mu$ m. b, c, d, e, f, g, h, i: 10  $\mu$ m.

tacular cirri small, shorter than dorsal cirri. Dorsal cirri on all setigers, ovate to digitiform, shorter than parapodia (Fig. 1a). Ventral cirri similar but shorter. Compound setae including on each parapodium one spiniger with long, fine spines distally on shaft heads, and several falcigers with proximal tooth longer and wider than distal one. Anterior parapodia each with one spiniger provided with about 4 or 5 very long spines on the shaft head, blade slender, unidentate, with short spines on the cutting margin, about 62  $\mu\text{m}$  long (Fig. 1b), and about 4 or 5 relatively long falcigers, without marked dorsoventral gradation in length or shape, about 20  $\mu\text{m}$  long (Fig. 1c). Marked antero-posterior gradation of falcigers and spinigers, both in length and shape. Spinigers acquiring progressively shorter and thinner spines on shafts-heads, and shorter and smoother blades. Falcigers with shorter blades and thicker shafts. In a medium parapodium, a blade of spiniger (Fig. 1e) is about 40  $\mu\text{m}$  long and a blade of falciger about 10  $\mu\text{m}$  (Fig. 1f). Solitary dorsal seta (Fig. 1d) from first setiger, provided with two distal teeth and one distal spine and short spinulation on ventral margin, thicker and more strongly bidentate posteriorly (Fig. 1g). Solitary ventral simple setae on far posterior setigers S-shaped, bidentate, with proximal tooth larger than distal one and few, short spines on ventral side (Fig. 1h). Anterior parapodia each with two slender acicula, only one aciculum posteriorly, thicker, with tip curved and rounded (Fig. 1i). Pharynx narrow, through about 3 or 4 segments; pharyngeal tooth thick, rounded, placed on anterior margin. Proventriculus small, barrel-shaped, through about 2 or 3 segments, with about 12–14 muscle cell rows (Fig. 1a). Pygidium rounded, with two relatively short anal cirri. Epidermal granules on all surfaces of body, most abundant anteriorly.

*Remarks.*—*Exogone acerata* is the only species of the genus lacking antennae and

provided with very long spines on the spinner shaft-heads. The general shape of the body and the shape of the setae of *E. acerata* are typical of a group of species, as *E. dispar* (Webster, 1879), *E. verugera* Claparède, 1868, *E. naidina* Örsted, 1845, and many others. The lack of antennae, although contrary to the diagnosis of the genus *Exogone*, does not justify erecting a new genus. Amoureux (1986) reported an *Exogone* sp. from Atlantic areas close to the Iberian Peninsula, and from the short description, these specimens also lack antennae. Hartman & Fauchald (1971) described the genus *Exogonita*, very close to *Exogone*, but without antennae and provided with two pairs of tentacular cirri rather than one pair. The first author of this paper examined all the type series of *Exogonita oculata* and, indeed, it lacks antennae, but all the specimens have only one pair of tentacular cirri rather than two pairs as it was described. So, *Exogonita oculata* is very similar to *E. acerata*, but lacks the long spines on the shafts of spinigers.

#### Acknowledgments

We wish to express our gratitude to Leslie Harris, Allan Hancock Foundation, California, U.S.A., for allowing the first author to examine the type series of *Exogonita oculata*.

#### Literature Cited

- Amoureux, L. 1972. Annélides Polychètes du Maroc.—Bulletin de la Société des Sciences Naturelles et Physiques du Maroc 52:47–72.
- . 1976. Annélides Polychètes recoltés par J. Stirn en 1969, sur les côtes marocaines du détroit de Gibraltar.—Cuadernos de Ciencias Biológicas 5:5–33.
- . 1986. Annélides Polychètes abyssaux de la Campagne Abyplaine au large de Madère.—Bulletin du Musée national d'Histoire naturelle de Paris, 4 sér., 8(A, 3):591–615.
- Besteiro, C., V. Urgorri, & J. S. Troncoso. 1990. Presence and distribution of the interstitial fauna in the coast of Ceuta (N. Africa).—Marine Biology (in press).

- Fauvel, P. 1936. Contribution a la faune des Annélides Polychètes du Maroc.—Mémoires de la Société des Sciences Naturelles du Maroc 43:1–143.
- Hartman, O., & K. Fauchald. 1971. Deep-water benthic polychaetous annelids off New England to Bermuda and other North Atlantic areas. Part 2.—Allan Hancock Monographs on Marine Biology 6:1–327.
- Sardá, R. 1984. La subfamilia Exogoninae (Polychaeta: Syllidae) de Gibraltar, con la descripción de *Pseudobrania euritmica*, n. sp.—Publicaciones del Departamento de Zoología de la Universidad de Barcelona 10:7–13.
- . 1985a. Estudio de la fauna de Anélidos Poliquetos de las zonas mediolitoral e infralitoral, en la región del Estrecho de Gibraltar. Resumen de la Tesis Doctoral.—Edicions de la Universitat de Barcelona 1–49.
- . 1985b. Anélidos Poliquetos del Estrecho de Gibraltar. I. Amphinomida, Spintherida y Phylodocida.—Miscellània Zoologica 9:65–78.
- . 1987. Sphaerodoridae (Annelida, Polychaeta) from the region of Gibraltar Strait with description of *Euritmia hamulisetosa*, gen. et sp. n.—Zoologica Scripta 16(1):47–50.

(GSM) Departamento de Biología, Unidad de Zoología, Facultad de Ciencias, Universidad Autónoma de Madrid, Canto Blanco, 28049 Madrid, Spain; (JP) Departamento de Biología Animal, Facultad de Biología, Universidade de Santiago de Compostela, La Coruña, Spain.